



## What is the impact of music therapy on memory function for older adults with dementia?

<b>Authors</b>	Amy Dunstan, Natalie Gentilcore, Maria Pallis and Victoria Yiambouranis
<b>Relevant Allied Health Discipline</b>	Occupational therapists, music therapists, dementia care/support workers and potentially nursing staff.
<b>Sources searched</b>	PubMed, Medline, Embase and OT Seeker. Searched between 21/08/2020 – 04/09/2020.
<b>Quality appraisal of the body of Evidence</b>	<b>Strength of Evidence:</b> According to the NHMRC (2009) Body of Evidence Framework, a D grade was allocated to the overall evidence. The strength of the evidence varied from low to moderate, as the studies included consisted of RCT (n=3), qualitative study (n=1), pre-post study (n=1) and clinical trials (n=3).
	<b>Quality of Evidence:</b> According to the NHMRC (2009) Body of Evidence Framework, a C grade (satisfactory) was allocated for the quality of evidence. The body of evidence provides some support for recommendation(s) but care should be taken in its application.
	<b>Statistical significance:</b> Across each of 8 included studies, p values were <0.05, indicating that there is probability of outcomes observed but are not guaranteed.
	<b>Clinical significance:</b> The body of evidence provides some support for recommendation(s) but care should be taken in its application. It is plausible to state that employment of music therapy as an intervention for patients with dementia (and other presentations such as AD) may lead to increased recall and improvements in autobiographical memory.
	<b>External Validity/Applicability:</b> There is moderate-low degree of certainty in the direct effects of music therapy on memory function. Care should be taken when providing this method of intervention in clinical settings to wider population.
<b>Summary of Evidence findings</b>	<ul style="list-style-type: none"> <li>• self-chosen/ preferred music to the listeners resulted in greater positive impacts on memory</li> <li>• self-chosen music was found to increase autobiographical recall specifically</li> <li>• use of singing in music therapy was reported in two studies to have a positive impact on memory</li> <li>• short term memory was found to be the most positively affected by music therapy in comparison with working and long-term memory.</li> <li>• mild and moderate dementia across the studies was found to have a greater positive response to MT across all studies.</li> </ul>
<b>Conclusions</b>	Ultimately, the confidence of the researchers in the effect estimate is limited, as the true effect of music therapy on improved memory in elderly people with dementia was not accurately captured in the literature.
<b>Implications for clinical practice</b>	It is recommended that clinicians consider its implementation in practice to be paired with other well-justified and evidence-based interventions. Researchers can support the application of music therapy in institutional geriatric settings but can't draw confident conclusions as to its effectiveness within mainstream housing and urban communities.

1. Chu, H., Yang, C., Lin, Y., Ou, K., Lee, T., O'Brien, A.P. & Chou, K. (2014). The impact of group music therapy on depression and cognition in elderly persons with dementia', *Biological Research for Nursing*, 16 (2), 209–217.
2. El Haj, M., Antoine, P., Nandrino, J.L., Gely-Nargeot, M.C. & Raffard, S. (2015). Self-defining memories during exposure to music in Alzheimer's disease, *International Psychogeriatric*, 27(10), 1719-30.
3. Sarkamo, T., Tervaniemi, M., Laitinen, S., Numminen, A., Kurki, M., Johnson, J.K. & Rantanen, P. (2014). Cognitive, emotional, and social benefits of regular musical activities in early dementia: randomized controlled study, *Gerontologist*, 54(4), 634-50.
4. Simmons-Stern, N.R., Deason, R.G., Brandler, B.J., Frustace, B.S., O'Connor, M.K., Ally, B.A & Budson, A.E. (2012). Music-based memory enhancement in Alzheimer's Disease: Promise and limitations, *Neuropsychologia*, 50(14), 3295–3303.
5. El Haj, M., Postal, V. & Allain, P. (2011). Music enhances autobiographical memory in mild Alzheimer's disease, *Educational Gerontology*, 38(1), 30-41.
6. Gallego, G.M. & García, G.J. (2017). Music therapy and Alzheimer's disease: Cognitive, psychological, and behavioural effects, *Neurología (English Edition)*, 32(5), 300-08.
7. Ceccato, E., Vigato, G., Bonetto, C., Bevilacqua, A., Pizzio, P., Crociani, S. & Barchi, E. (2012). STAM protocol in dementia: A multicenter, single-blind, randomized, and controlled trial, *American Journal of Alzheimer's Disease & Other Dementias*, 27(5), 301–310.
8. El Haj, M., Fasotti, L. & Allain, P. (2012). The involuntary nature of music-evoked autobiographical memories in Alzheimer's disease', *Consciousness and Cognition*, 21(1), 238–246.

This evidence summary has been prepared by undergraduate students as part of the HLTH 3057 Advanced Evidence Based Practice course. Due to limitations of assignment requirements reviews are limited to a maximum of 8 evidence sources. Conclusions and implications for clinical practice reported are provisional based on the evidence identified in this review and should be contextualized to local practice, clinical expertise and patient values. For further information on the review process please contact [steve.milanese@unisa.edu.au](mailto:steve.milanese@unisa.edu.au)